

Applicants: Taka Aki Sato and Junn Yanagisawa
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Amendments to the claims:

Certain claims have been amended below without disclaimer or prejudice to applicants' right to pursue the subject matter of these claims in a continuation application.

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1-121. (canceled)

122. (currently amended) The method of claim 142, wherein the inhibition of specific binding between the ~~signal-transducing protein polypeptide~~ and the cytoplasmic protein affects the transcription activity of a reporter gene.

123. (currently amended) The method of claim 122, where in step (b) the displaced ~~signal transducing protein polypeptide~~ or the complex is detected by comparing the transcription activity of a reporter gene before and after the contacting with the compound in step (a), where a change of the activity indicates that the specific binding between the ~~signal transducing protein polypeptide~~ and the cytoplasmic protein is inhibited and the signal-transducing protein is displaced.

124. (currently amended) The method of claim 122, where in step (b) the displaced cytoplasmic protein or the complex is detected by comparing the transcription activity of a reporter gene before and after the contacting with the compound in step (a), where a change of the activity indicates that the specific binding between the ~~signal-transducing protein polypeptide~~ and the cytoplasmic protein is inhibited and the cytoplasmic protein is displaced.

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125. (previously presented) The method of claim 142, wherein the cytoplasmic protein is bound to a solid support.
126. (previously presented) The method of claim 142, wherein the agent is bound to a solid support.
127. (previously presented) The method of claim 142, wherein the compound comprises an antibody, an inorganic compound, an organic compound, a peptide, a peptidomimetic compound, a polypeptide or a protein.
128. (previously presented) The method of claim 142, wherein the contacting of step (a) is in vitro.
129. (previously presented) The method of claim 142, wherein the contacting of step (a) is in vivo.
130. (previously presented) The method of claim 129, wherein the contacting of step (a) is in a yeast cell.
131. (previously presented) The method of claim 129, wherein the contacting or step (a) is in a mammalian cell.
132. (currently amended) The method of claim 142, wherein the ~~signal transducing protein~~ polypeptide is a cell surface receptor.
- 133-139. (canceled)

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140. (previously presented) The method of claim 142, wherein the cytoplasmic protein contains the amino acid sequence SLGI (SEQ ID NO:3).

141. (canceled)

142. (currently amended) A method of identifying an agent that inhibits the interaction between (i) a ~~signal transducing protein polypeptide~~ comprising a peptide an amino acid sequence selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16 and (ii) a cytoplasmic protein comprising the amino acid sequence as set forth in SEQ ID NO:1, comprising:

(a) contacting the cytoplasmic protein bound to the ~~signal transducing protein polypeptide~~ with the agent, wherein the contacting occurs under conditions permitting (i) binding between the ~~signal transducing protein polypeptide bound to and the cytoplasmic protein and a compound previously shown to be able to displace or~~ (ii) ~~displacement of the signal transducing protein polypeptide bound to the cytoplasmic protein and form wherein the agent forms~~ a complex with the cytoplasmic protein to which the ~~signal transducing protein polypeptide~~ is no longer bound; and

(b) detecting (i) displaced ~~signal transducing protein polypeptide~~ or (ii) the complex from step (a), wherein the detection of displaced ~~signal transducing protein polypeptide~~ or the complex indicates that the agent

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inhibits the interaction between the ~~signal transducing~~ protein polypeptide and the cytoplasmic protein.

143. (currently amended) A method of identifying an agent that inhibits the interaction between (i) a ~~signal transducing~~ protein polypeptide comprising a ~~peptide~~ an amino acid sequence selected from the group consisting of amino acid sequences as set forth in SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16 and (ii) a cytoplasmic protein comprising the amino acid sequence as set forth in SEQ ID NO:1, comprising:

(a) contacting the cytoplasmic protein bound to the ~~signal transducing~~ protein polypeptide with a plurality of compounds, wherein the contacting occurs under conditions permitting (i) binding between the ~~signal transducing~~ protein polypeptide ~~bound to~~ and the cytoplasmic protein ~~and a compound previously shown to be able to displace~~ or (ii) displacement of the ~~signal transducing~~ protein polypeptide bound to the cytoplasmic protein ~~and form~~ wherein the agent forms a complex with the ~~signal transducing~~ protein polypeptide to which the cytoplasmic protein is no longer bound; and

(b) detecting (i) displaced cytoplasmic protein or (ii) the complex from step (a), wherein the detection of displaced cytoplasmic protein or the complex indicates that the agent inhibits the interaction between the ~~signal transducing~~ protein polypeptide and the cytoplasmic protein.

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144. (currently amended) The method of claim 143, wherein the inhibition of specific binding between the ~~signal-transducing protein polypeptide~~ and the cytoplasmic protein affects the transcription activity of a reporter gene.

145. (currently amended) The method of claim 144, where in step (b) the displaced ~~signal transducing protein polypeptide~~ or the complex is detected by comparing the transcription activity of a reporter gene before and after the contacting with the compound in step (a), where a change of the activity indicates that the specific binding between the ~~signal transducing protein polypeptide~~ and the cytoplasmic protein is inhibited and the ~~signal-transducing protein polypeptide~~ is displaced.

146. (previously presented) The method of claim 143, wherein the cytoplasmic protein is bound to a solid support.

147. (previously presented) The method of claim 143, wherein the agent is bound to a solid support.

148. (previously presented) The method of claim 143, wherein the compound comprises an antibody, an inorganic compound, an organic compound, a peptide, a peptidomimetic compound, a polypeptide or a protein.

149. (previously presented) The method of claim 143, wherein the contacting of step (a) is in vitro.

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150. (previously presented) The method of claim 143, wherein the contacting of step (a) is in vivo.
151. (previously presented) The method of claim 150, wherein the contacting of step (a) is in a yeast cell.
152. (previously presented) The method of claim 150, wherein the contacting or step (a) is in a mammalian cell.
153. (currently amended) The method of claim 143, wherein the ~~signal transducing protein~~ polypeptide is a cell surface receptor.
154. (previously presented) The method of claim 143, wherein the cytoplasmic protein contains the amino acid sequence SLGI (SEQ ID NO:3).